What is claimed is:

1. An optical disk drive comprising:

a housing including a base portion;

an optical disk having information on at least one side;

said optical disk mounted on a shaft for rotation;

a rotary actuator having a first end and a second end, said first end pivotally mounted to said base portion for positioning the second end relative to the surface of the disk;

an optical pick up unit disposed on said second end of said actuator, said optical pick up unit comprising a light beam generating member, an objective lens and at least one light beam directing member.

2. The optical disk drive of Claim 1, wherein said rotary actuator pivots about a shaft.

3. The optical disk drive of Claim 1, wherein said rotary actuator comprises a knife edge pivot.

4. The optical disk drive of Claim 1, wherein said rotary actuator comprises a ball bearing pivot.

5. The optical disk drive of Claim 1, wherein said rotary actuator comprises a jewel bearing pivot.

6. The optical disk drive of Claim 1, wherein said rotary actuator comprises a flexure pivot.

7. The optical disk drive of Claim 1, wherein said rotary actuator comprises a bushing pivot.

8. The optical disk drive of Claim 1, wherein said rotary actuator comprises a split band pivot.

9. The optical disk drive of Claim 1, wherein said rotary actuator comprises a torsional pivot.

10. The optical disk drive of Claim 1, wherein said actuator moves in three dimensions relative to the surface of the disk.

11. The optical disk drive of Claim 1, wherein said rotary actuator comprises a tracking arm and a focus arm.

12. The optical disk drive of Claim 11, wherein said focus arm comprises a voice coil motor which is substantially balanced relative to the axis of rotation for said focus arm.

13. The optical disk drive of Claim 11, wherein said focus arm comprises a voice coil motor which is unbalanced relative to the axis of rotation for said focus arm.

14. The optical disk drive of Claim 11, wherein said tracking arm moves substantially parallel to the surface of the disk and said focus arm moves said optical pick up unit in a direction substantially perpendicular to the surface of the disk.

15. The optical pick up unit of Claim 14, wherein said tracking arm comprises a voice coil motor having a moving magnet.

16. The optical pick up unit of Claim 15, wherein said moving magnet is on the same side of the rotational axis for said tracking arm as is said optical pick up unit.

17. The optical pick up unit of Claim 15, wherein said moving magnet is on the opposite side of the rotational axis for said tracking arm as is said optical pick up unit.

18. The optical pick up unit of Claim 14, wherein said tracking arm comprises a voice coil motor having a moving coil.

19. The optical pick up unit of Claim 18, wherein said moving coil is on the same side of the rotational axis for said tracking arm as is said optical pick up unit.

20. The optical pick up unit of Claim 18, wherein said moving coil is on the opposite side of the rotational axis for said tracking arm as is said optical pick up unit.

21. The optical pick up unit of Claim 14, wherein said focus arm comprises a voice coil motor having a moving magnet.

22. The optical pick up unit of Claim 21, wherein said moving magnet is on the same side of the rotational axis for said focus arm as is said optical pick up unit.

23. The optical pick up unit of Claim 21, wherein said moving magnet is on the opposite side of the rotational axis for said focus arm as is said optical pick up unit.

24. The optical pick up unit of Claim 14, wherein said focus arm comprises a voice coil motor having a moving coil.

25. The optical pick up unit of Claim 24, wherein said moving coil is on the same side of the rotational axis for said focus arm as is said optical pick up unit.

26. The optical pick up unit of Claim 24, wherein said moving coil is on the opposite side of the rotational axis for said focus arm as is said optical pick up unit.

27. The optical disk drive of Claim 1, wherein said rotary actuator is a single stage for tracking.

28. The optical disk drive of Claim 1, wherein said rotary actuator is a dual stage for tracking.

29. The optical pick up unit of Claim 13, where said focus arm voice coil motor is positioned proximate the center of percussion of said focus arm.

30. In an optical disk drive including a housing having a base and cover, an optical disk mounted on a spindle for rotation relative to said base, the improvement comprising: a rotary actuator having an optical pick up unit disposed at the distal end of said actuator, said optical pick up unit comprising a light emitting source and an objective lens for focusing a light beam emitted by said light source on the data layer of the optical disk.

31. The optical disk drive of Claim 30 wherein said optical pick up unit pivots relative to the surface of said disk.

32. The optical disk drive of Claim 30, wherein said objective lens moves in an arcuate path toward and away from the surface of said disk.

33. In an optical disk drive including a housing having a base and cover, an optical disk mounted on a spindle for rotation relative to said base, data resident on the optical disk, a light emitting source for generating a light beam to read data from and write data to the disk, and an actuator for positioning an objective lens relative to the surface of the disk, the objective lens acting to direct the light beam to the disk, the improvement comprising: the actuator being a rotary actuator and the light emitting source and the objective lens both positioned at the distal end of the rotary actuator.

34. The optical disk drive of Claim 33, wherein said actuator further comprises a first arm to position the objective lens in two dimensions substantially parallel to the surface of the optical disk, and a second arm mounted to said first arm to position the objective lens in a third dimension substantially perpendicular to the surface of said optical disk.

35. The optical disk drive of Claim 33 further comprising a first pivot means for positioning said first arm and a second pivot means for positioning said second arm.

36. The optical disk drive of Claim 35, wherein said first pivot means comprises a voice coil motor.

37. The optical disk drive of Claim 36, wherein said voice coil motor comprises a moving magnet.

38. The optical disk drive of Claim 37, wherein said moving magnet is disposed on the same side of the rotational axis for the first arm as is said light source and said objective lens.

39. The optical disk drive of Claim 37, wherein said moving magnet is disposed on the opposite side of the rotational axis for the first arm as is said light source and said objective lens.

40. The optical disk drive of Claim 36, wherein said voice coil motor comprises a moving coil.

41. The optical disk drive of Claim 40, wherein said moving coil is disposed on the same side of the rotational axis for the first arm as is said light source and said objective lens.

42. The optical disk drive of Claim 40, wherein said moving coil is disposed on the opposite side of the rotational axis for the first arm as is said light source and said objective lens.

43. The optical disk drive of Claim 35, wherein said first pivot means comprises one of the group comprising a ball bearing pivot, a jewel bearing pivot, a knife edge pivot, a flexure pivot, a bushing pivot, a split band pivot, and a torsion pivot.

44. The optical disk drive of Claim 35 wherein said second pivot means comprises a voice coil motor.

45. The optical disk drive of Claim 44, wherein said voice coil motor comprises a moving magnet.

46. The optical disk drive of Claim 45, wherein said moving magnet is disposed on the same side of the rotational axis for the second arm as is said light source and said objective lens.

47. The optical disk drive of Claim 45, wherein said moving magnet is disposed on the opposite side of the rotational axis for the second arm as is said light source and said objective lens.

48. The optical disk drive of Claim 44, wherein said voice coil motor comprises a moving coil.

49. The optical disk drive of Claim 48, wherein said moving coil is disposed on the same side of the rotational axis for the second arm as is said light source and said objective lens.

50. The optical disk drive of Claim 48, wherein said moving coil is disposed on the opposite side of the rotational axis for the second arm as is said light source and said objective lens.

51. The optical disk drive of Claim 35, wherein said second pivot means comprises one of the group comprising a ball bearing pivot, a jewel bearing pivot, a knife edge pivot, a flexure pivot, a bushing pivot, a split band pivot, a torsion pivot.

52. The optical disk drive of Claim 34, wherein the data on the disk is arranged in track and said first arm comprises a single stage member for coarse and fine tracking.

53. The optical disk drive of Claim 34, wherein the data on the disk is arranged in track and said first arm comprises a dual stage member for coarse and fine tracking.

54. In an optical disk drive including a housing having a base and cover, an optical disk mounted on a spindle for rotation relative to said base, the optical disk containing data, a light emitting source for generating a light beam to read data from and write data to the disk, and an actuator for positioning an objective lens relative to the surface of the disk, the objective lens acting to direct the light beam to the disk, the improvement comprising: moving the objective lens in an arcuate path toward and away from the surface of the disk to assist focusing of the light beam on the data.

55. The optical disk drive of Claim 54 wherein the light source is positioned near the distal end of the actuator.

56. The optical disk drive of Claim 55 wherein the light source is a laser.

57. The optical disk drive of Claim 54 wherein the actuator comprises a tracking arm which positions the objective lens in a manner substantially parallel to the disk surface and a focus arm which positions the objective lens substantially perpendicular to the surface of the disk.

58. The optical disk drive of Claim 57 wherein said tracking arm comprises positioning means to position said tracking arm.

59. The optical disk of Claim 58, wherein said tracking arm is substantially balanced relative to the axis about which said tracking arm is positioned.

60. The optical disk drive of Claim 58, wherein said tracking arm is a single stage member.

61. The optical disk drive of Claim 57 wherein said focus arm comprises positioning means to position said focus arm.

62. The optical disk of Claim 61, wherein said focus arm is substantially balanced relative to the axis about which said focus arm is positioned.

63. The optical disk drive of Claim 61, wherein said focus arm is unbalanced and said positioning means is a voice coil motor disposed proximate said focus arm.

64. An optical disk drive comprising:

a housing having a base and a cover;

a light beam for reading data and writing data;

optical medium means for storing data, said optical medium means comprising a substrate and an information containing portion, said information containing portion different from said substrate, with the light beam impinging on said information layer before it impinges on said substrate;

a motor for rotating said optical medium means relative to said base; and

a rotary actuator for positioning an objective lens relative to said information layer.

65. The optical disk drive of Claim 64 wherein said optical medium means comprises first-surface optical medium.

66. The optical disk drive of Claim 64 wherein said optical medium means comprises second-surface optical medium.

67. The optical disk drive of Claim 64 wherein said information layer has a thickness less than said substrate thickness.

68. The optical disk drive of Claim 64 wherein said rotary actuator comprises a tracking arm and a focus arm.

69. The optical disk drive of Claim 64 further comprising a laser for generating said light beam, wherein said laser is disposed at the distal end of said actuator.

70. The optical disk drive of Claim 68 further comprising a laser for generating said light beam, wherein said laser is disposed on said focus arm.

71. The optical disk drive of Claim 68 wherein said focus arm moves in a direction generally perpendicular to said information layer.

72. A method for reading data from or writing data to an optical disk, comprising:

spinning an optical disk, said disk including an information layer;

placing an optical pick up unit, comprising a light source and an objective lens, at the distal end of a rotary actuator;

generating a light beam from said light source;

directing said light beam from said light source to said information layer through said objective lens;

reading data on said information layer;

pivoting the rotary actuator to position the optical pick up unit in substantially two dimensions relative to the surface of the disk;

pivoting the optical pick up unit about a pivot point to position the objective lens in a third dimension relative to the disk surface.

73. The method of Claim 72, wherein said third dimension is substantially orthogonal to the surface of said disk..

74. The method of Claim 72, further comprising repositioning said optical pick up unit for focusing purposes.

75. The method of Claim 72, further comprising balancing the components of said rotary actuator.

76. The method of Claim 72 further comprising using the data read from the information layer to adjust the position of the optical pick up unit in the third dimension.

77. The method of Claim 72, further comprising repositioning said objective lens along an arcuate path for focusing purposes.

78. In an optical disk drive comprising:

a housing including a base portion;

an optical disk having an information layer on at least one side, said information layer including data;

said optical disk mounted on a shaft for rotation;

an objective lens mounted on a rotary actuator;

first positioning means associated with said rotary actuator for positioning said objective lens in two dimensions substantially parallel to said information layer; and,

second positioning means associated with said rotary actuator for pivoting said objective lens in a third dimension relative to said information layer.

79. The optical pick up unit of Claim 78 further comprising a processor for receiving data from said information layer in the form of a signal, said signal at least indicative of changes in the relative position of said objective lens and said information layer, wherein based upon said signal said second positioning means repositions the objective lens relative to the data layer to attempt to maintain the ability to read and write.

80. The optical disk drive of Claim 78, wherein said first positioning means is balanced.

81. The optical disk drive of Claim 78, wherein said first positioning means is a voice coil motor.

82. The optical disk drive of Claim 78, wherein said first positioning means is a tracking arm.

83. The optical disk drive of Claim 78, wherein said first positioning means comprises one of the group comprising a ball bearing pivot, a jewel bearing pivot, a knife edge pivot, a flexure pivot, a bushing pivot, a split band pivot, a torsion pivot.

84. The optical disk drive of Claim 78, wherein said second positioning means is balanced.

85. The optical disk drive of Claim 78, wherein said second positioning means is a voice coil motor.

86. The optical disk drive of Claim 78, wherein said second positioning means comprises one of the group comprising a ball bearing pivot, a jewel bearing pivot, a knife edge pivot, a flexure pivot, a bushing pivot, a split band pivot, a torsion pivot.

87. The optical disk drive of Claim 78, wherein said second positioning means is a focus arm.

88. The optical disk drive of Claim 87, further comprising a voice coil motor disposed at the center of percussion for said focus arm.